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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/568,681

02/17/2006

Ken'ichi Kasazumi

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EXAMINER

DOAK, JENNIFER L

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/568,681	<b>Applicant(s)</b> KASAZUMI ET AL.
	<b>Examiner</b> Jennifer L. Doak	<b>Art Unit</b> 2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13, 15-17, 19, 20 and 24 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/26/06; 2/17/06</u>  | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Election/Restrictions***

Claims 14 and 21-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/10/08.

### ***Specification***

The title of the invention is not sufficiently descriptive. “The title should be brief but technically accurate and descriptive and should contain fewer than 500 characters,” MPEP §606. Specifically, statements concerning the general type or nature of the entire system or its components that are common to many other similar elements or systems that are known in the art are not sufficiently descriptive to provide “informative value in indexing, classifying, searching, etc.,” MPEP §606.01. Examiner recommends directing the title to what Applicant believes is the point of novelty, since it is by the novelty that “indexing, classifying, searching, etc.” is generally accomplished. Nevertheless, it should be noted that, pursuant to MPEP §606.01, “[i]f a satisfactory title is not supplied by the applicant, the examiner may, at the time of allowance, change the title by examiner’s amendment.”

A new title is required that is more clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 13, 15-20, 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The means-plus-function claim language invokes 35 USC 112, 6<sup>th</sup> paragraph, by meeting the following test: (1) “means for” or “step for” language ("means for scanning light," "means for modulating the light," "means for minutely oscillating"); (2) said language is further modified by functional language (i.e., “for scanning light,” “for modulating the light,” “for minutely oscillating”); (3) and the modifying language does not constitute sufficient structure, material, or acts for achieving the specified function (i.e., such language is not included here; not corresponding structure is provided in claims 13 or 24 that would accomplish these functions), MPEP §2181. The reference discloses the claimed corresponding structure or equivalent thereof, *In re Morris*, 44 USPQ2d 1023 (Fed. Cir. 1989).

With respect to the "means for scanning light," Applicant's specification (at para. 9 of the Pre-Grant Publication 2008/0170285) describes "for example, a polygon scanner, a galvanometer scanner, etc.", and the interpretation herein is a corresponding or equivalent structure.

With respect to the "means for modulating the light," Applicant's specification (at paras. 9, 21, 22, 24 of the Pre-Grant Publication 2008/0170285) describes non-specific structure for input/video signal modulation, leaving any particular structure(s) associated with such a function undefined. Thus the metes and bounds of this limitation are not sufficiently defined to meet the requirements of 35 USC 112 (second para.). Therefore, for the purpose of examination, it will be assumed that any modulation meets the limitation requirements.

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With respect to the "for minutely oscillating," Applicant's specification (at paras. 29-31 of the Pre-Grant Publication 2008/0170285) describes non-specific structure as well as extensive experimentation for the scanning, leaving any particular structure(s) associated with such a function undefined. Thus the metes and bounds of this limitation are not sufficiently defined to meet the requirements of 35 USC 112 (second para.). Therefore, for the purpose of examination, it will be assumed that the intended means reference is to an electro-optic element.

Claims depending from these independent claims also inherit the same problems.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13, 15-17, 20, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Gerhard (US 6140979).

Regarding claims 13 and 24, Gerhard discloses a 2-D image display device/an illumination light source comprising: a coherent light source (Fig. 17: 78); 2-D beam scan means for scanning light from the coherent light source two-dimensionally (152); light intensity modulation means for modulating (154) the light from the coherent light source in intensity; and beam oscillation means for minutely oscillating the light (Fig. 19) from the coherent light source.

Regarding claims 15-17, Gerhard does not explicitly state that the beam oscillation means oscillates the light from the coherent light source in a direction perpendicular to a scan line by the 2-D beam scan means; the beam oscillation means oscillates the light on the screen in

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amplitude equal to or larger than a spot diameter of the light collected on the screen by the beam collection means, and equal to or smaller than an interval of scan lines by the 2-D beam scan means; while the 2-D beam scan means scans the light from the coherent light source comparable to one digital image data along a scan line, the beam oscillation means oscillates the light at least from largest amplitude to following largest amplitude.

However, these features are seen to be an inherent teaching of the device since it is disclosed that the angular shift of the beams are controlled, that the shift corresponds to the voltage, and offsets raster pinch (col. 11, lns. 1-20) is disclosed, and it is apparent that the control and beam relationships set forth above must be present for the device to function as intended.

Regarding claim 20, Gerhard further discloses that the beam oscillation means uses an electro-optic effect (col. 11, ln. 1).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gerhard (US 6140979).

Regarding claim 19, Examiner makes the following findings of fact: Gerhard further discloses in a case where the light from the coherent light source is oscillated in N cycles by the beam oscillation means while the 2-D beam scan means scans the light from the coherent light source comparable to one digital image data along a scan line, (col. 11, lns. 1-20). Gerhard does not disclose that a spot diameter of the light projected onto the screen is of a size equal to or larger than  $1/(4N)$  of a distance over which the light is scanned by the 2-D beam scan means within the scan time. However, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art, *In re Aller*, 105 USPQ 233 (C.C.P.A. 1955). The benefits of optimization include improved clarity and coherence of the displayed image.

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Therefore, Examiner concludes that it would have been obvious to an ordinarily skilled artisan at the time of invention to optimize the distance and proportion of the projector light and image with respect to the projection system so as to improve the quality of the projected image.

*Allowable Subject Matter*

Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:  
With respect to claim 18, depending from claim 1 (addressed above), though the prior art discloses

The 2-D image display device according to Claim 13, wherein: while the 2-D beam scan means scans the light from the coherent light source comparable to one digital image data along a scan line,

the prior art of record fails to teach or suggest the aforementioned combination further comprising

the beam oscillation means oscillates the light in a non-integral multiple of one cycle.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."



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*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer L. Doak whose telephone number is (571)272-9791.

The examiner can normally be reached on Mon-Thurs: 7:30A-5:00P, Alt Fri: 7:30A-4:00P (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. L. D./  
Examiner, Art Unit 2872

/Alessandro Amari/  
Primary Examiner, Art Unit 2872